

**REMARKS**

Claims 1, 4-16 are pending after entry of this paper. Claims 1-4 have been rejected. Claims 5-16 have been objected to. Claims 2 and 3 have been cancelled without prejudice. Applicants reserve the right to pursue cancelled claims in a divisional or continuing application.

Claims 1 has been amended to incorporate the subject matter of cancelled claims 2 and 3. Claims 4-14 and 16 have been amended to place the claims in proper claim form.

No new matter has been introduced by these amendments. Reconsideration and withdrawal of the pending objections and rejections in view of the above claim amendments and below remarks are respectfully requested.

**Response to Claim Objections**

Claim 1 is objected to as failing to separate each step of the claim. In response, claim 1 has been amended to separate the steps by a line indentation.

Claim 2 is objected to under 37 C.F.R. §1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. The applicants have cancelled claim 2 rendering this rejection moot.

Claims 5-16 are objected to under 37 C.F.R. §1.75(c) as being in improper form. In response, the applicants have amended claims 5-14 and 16 to place them in proper claim format. Since claim 14 has been amended, reasons for the objections to claim 15 has been resolved.

Response to Rejections under 35 U.S.C. §103

Claims 1-4 are rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Japanese Patent No. JP 44-6211 B to General Foods Corp. (“General Foods”) in view of U.S. Patent No. 6,630,195 to Muralidhara, et al. (“Muralidhara”). Specifically, the Examiner contends that General Foods anticipates each and every element of the claims except that General Foods is admittedly “silent as to *separating the extraction solution while maintaining a neutral to alkaline pH*, as well as to the use of a *counter-current extraction* in the extraction step” (page 3, Office Action 10/31/07). However, according to the Examiner, the concept of a neutral to alkaline pH extraction as well as the use of multi-stage counter-current extractions, for example, is described in the Muralidhara disclosure. The Examiner alleges that it would have been obvious to one skilled in the art at the time the invention was filed to combine the disclosure of extraction methods from Muralidhara with the method of General Foods to result in the instant invention. The Examiner’s contentions are found on pages 3-4 of Office Action 10/31/07. Applicants respectfully disagree. However, in order to expedite prosecution and solely for the purpose of allowance of the instant application, applicants have amended claim 1 to include the elements of original claims 2 and 3. Specifically, claim 1 as amended contains the elements *wherein no acid-precipitation step is carried out* and an extraction step *by a counter-current extraction method*.

As set forth by the MPEP guidelines, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. The teaching, suggestion, or motivation *must be found either explicitly or implicitly* in the references themselves or in the knowledge generally available to one of ordinary skill in the art. The test for an implicit showing

is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. (MPEP §2143.01 (I))

The applicants respectfully posit that the Examiner has not provided an argument to establish the existence of a *prima facie* case to combine General Foods and Muralidhara to arrive at the instant invention. The instant invention is directed to a method to produce an isolated soy protein with a high purity and excellent gelling properties obtained by combining an “acid-washing step” and “counter current extraction step” to obtain a high quality soy protein *without* the use of the conventional “acid-precipitation step” or “membrane filtration step”. In contrast, General Foods and Muralidhara both requires as an essential step a further purification technique, either acid-precipitation or membrane filtration, respectively, to enable the isolation of a high quality soy protein. Neither the cited references nor the general knowledge in the art teach, suggest or motivate the abandonment of the conventional steps of “acid-precipitation” or “membrane filtration” to enable the isolation of a tasty soy protein with excellent heat gellation properties and a high protein content (when compared to the soy protein products obtained by conventional methods). Thus, the instant invention is not obvious as there is no teaching, suggestion or motivation to combine General Foods and Muralidhara.

The Examiners attention is also respectfully drawn to MPEP §2143.01 (V) which states: “if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” Amended claim 1 has the proviso “wherein no acid-precipitation step is carried out”. Thus, the applicants assert that by removing the acid precipitation step (as required by claim 1 of the instant invention) the method disclosed by General Foods would become

inoperable for its intended purpose, because the method disclosed by General Foods requires the acid precipitation step.

Additionally, as set forth by the MPEP guidelines, in order to reject claims as prima facie obvious, prior art can be only be modified or combined *as long as there is a reasonable expectation of success* (MPEP §2143.01 (I)).

The applicants assert that there would be not be an expectation for success upon combination of General Foods with Muralidhara. This combination would require the elimination of an essential acid precipitation step (General Foods) or filtration step (Muralidhara) in order to arrive at the claimed invention. Specifically, both cited references disclose a further purification step *is essential* subsequent to the neutral to alkaline extraction step common to both methods. However, the further purification, as disclosed and required by the cited references, supports the unexpected results of the instant invention. Specifically, it would not be expected that a method of isolating soy protein which does not require further purification (e.g., acid precipitation or filtration) after the extraction step would succeed in producing a soy protein with a high purity and excellent gelling properties.

The Examiner's attention is further directed to MPEP §716.02(a) (I) which states: "[a] greater than expected result is an evidentiary factor pertinent to the legal conclusion of obviousness ... of the claims at issue." In this respect, the applicants proffer that the claimed invention recites a method producing *greater* than expected results. Specifically, the gellation properties of the soy protein of the instant invention compete with or exceed the properties of those disclosed in the cited references (See, Comparative Example 1 and Example 4 of the specification as filed). For example, Muralidhara describes in Example 10 that "[t]he weakness of the gels formed from the samples prepared according to Examples 4-7 is another major

observation. ... Soy gels at 12-13% w/w/ can have break strengths of up to about 70 g, ... the gel strength of soy isolates is typically low and the four prototypes described in Examples 4-7 are at the low end of the range expected for soy isolates” (emphasis added) (Column 26, lines 30-42). Thus it has been demonstrated that the isolated soy protein with a low gelling power is obtained by the method of Muralidhara. Moreover, a skilled artisan could not have predicted that the isolated soy protein obtained in the instant invention, which is free from an acid-precipitation step, has a gelling property which is equal or superior to those of the isolated soy proteins that have undergone the conventional acid-precipitation step. Thus, General Foods does not teach all of the claimed elements of the instant invention. Additionally, the disclosure of General Foods, either alone or in combination with Muralidhara, is not sufficient to render the claims obvious.

In view of the above amendments and arguments, applicants submit that the claims as presented herein is allowable over the art of record. Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claims 1 and 4 (Applicants note that claims 2 and 3 have been cancelled rendering the rejection to these claims moot).

Claims 1-4 are rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over U.S. Patent No. 6,630,195 to Muralidhara in view of Japanese Patent No. JP 44-6211 B to General Foods. Specifically, the Examiner contends that Muralidhara anticipates each and every element of the claims except that Muralidhara is admittedly silent as to the use of *acid washing protein flakes* (page 4, Office Action 10/31/07). However, according to the Examiner, the concept of acid washing protein flakes, for example, is described in the General Foods disclosure. Therefore, the Examiner alleges that it would have been obvious to one skilled in the art at the time the invention was filed to use the disclosure of the acid washed soy-protein flakes

from General Foods in the basic protein extracting method of Muralidhara to improve a process for isolating soy protein. The Examiner's contentions are found on pages 4-5 of Office Action 10/31/07. Applicants respectfully disagree. However, in order to expedite prosecution and solely for the purpose of allowance of the instant application, applicants have amended claim 1 to include the elements of original claims 2 and 3. Specifically, claim one contains the elements *wherein no acid-precipitation step is carried out and an extraction step by a counter-current extraction method.*

The applicants believe that the arguments submitted with respect to the §103(a) obviousness rejection over General Foods in view of Muralidhara (see above) are sufficient to overcome the §103(a) obviousness rejection over Muralidhara in view of General Foods.

The applicants additionally assert that modifying Muralidhara would cause the invention disclosed by Muralidhara to become inoperable for its intended purpose, therefore the disclosure of the references are not sufficient to render the claims obvious. Specifically, Muralidhara discloses the extraction step and a membrane filtration step wherein the clarified extract obtained from the extraction step is further purified by a sophisticated filtration system comprising a microporous membrane filtration surface with a contact angle of no more than 30 degrees, wherein the membrane permeate is removed and the protein is separated and concentrated as a membrane retentate, resulting in the isolation of soy protein. Arrival at the instant invention as recited in claim 1, does not require the filtration step essential to the method of Muralidhara. Thus, by removing the critical filtration step from Muralidhara would not be acceptable as it would render the method of Muralidhara inoperable for its intended purpose (i.e., isolating soy protein). Therefore, Muralidhara does not disclose all of the claimed elements of

the instant invention, nor is the disclosure of Muralidhara, either alone or in combination with General Foods, sufficient to render the claims obvious.

In view of the above amendments and arguments, applicants submit that the claims as presented herein is allowable over the art of record. Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. §103(a) obviousness rejection of claims 1 and 4 (Applicants note that claims 2 and 3 have been cancelled rendering the rejection to these claims moot).

#### Dependent Claims

The applicants have not independently addressed all of the rejections of the dependent claims. The applicants submit that for at least similar reasons as to why independent claim 1 from which all of the dependent claims 4-16 depend are believed allowable as discussed *supra*, the dependent claims are also allowable. The applicants however, reserve the right to address any individual rejections of the dependent claims and present independent bases for allowance for the dependent claims should such be necessary or appropriate.

Thus, applicants respectfully submit that the invention as recited in the claims as presented herein is allowable over the art of record, and respectfully request that the respective rejections be withdrawn.

#### **CONCLUSION**

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application. Favorable action by the Examiner is earnestly solicited.

**AUTHORIZATION**

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **13-4500**, Order No. 4439-4029.

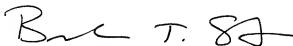
In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **13-4500**, Order No. 4439-4029.

Respectfully submitted,

MORGAN & FINNEGAN, L.L.P.

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By:



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